

Honeywell

1977

AR27



Cover: Demonstration of the newest model of Honeywell's micro-processor-based TDC 2000 industrial process control system, which can be applied to the most complex plant operation without fear of system failure. Major functional extensions were introduced to the unit in 1977.

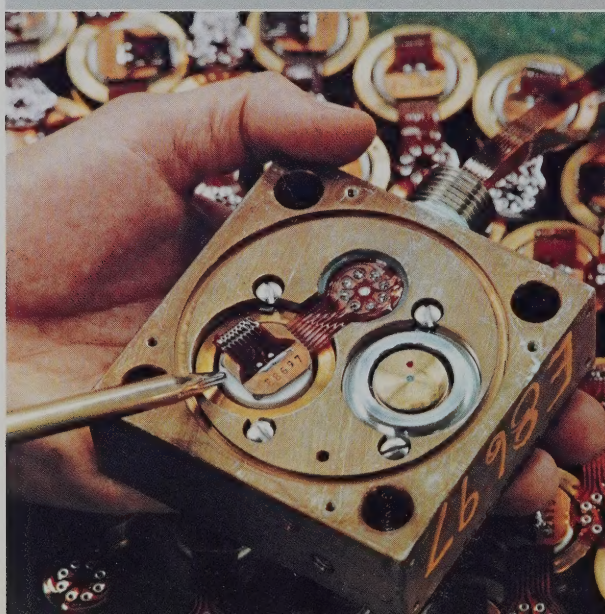
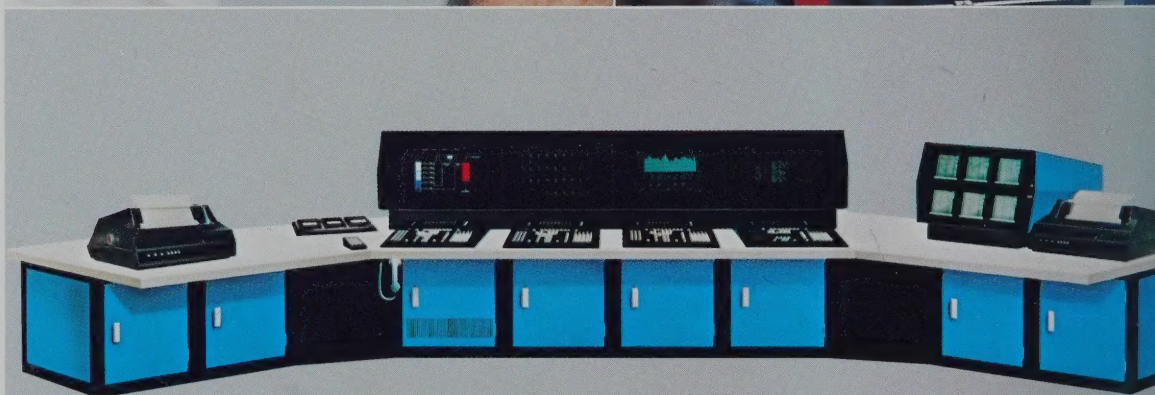
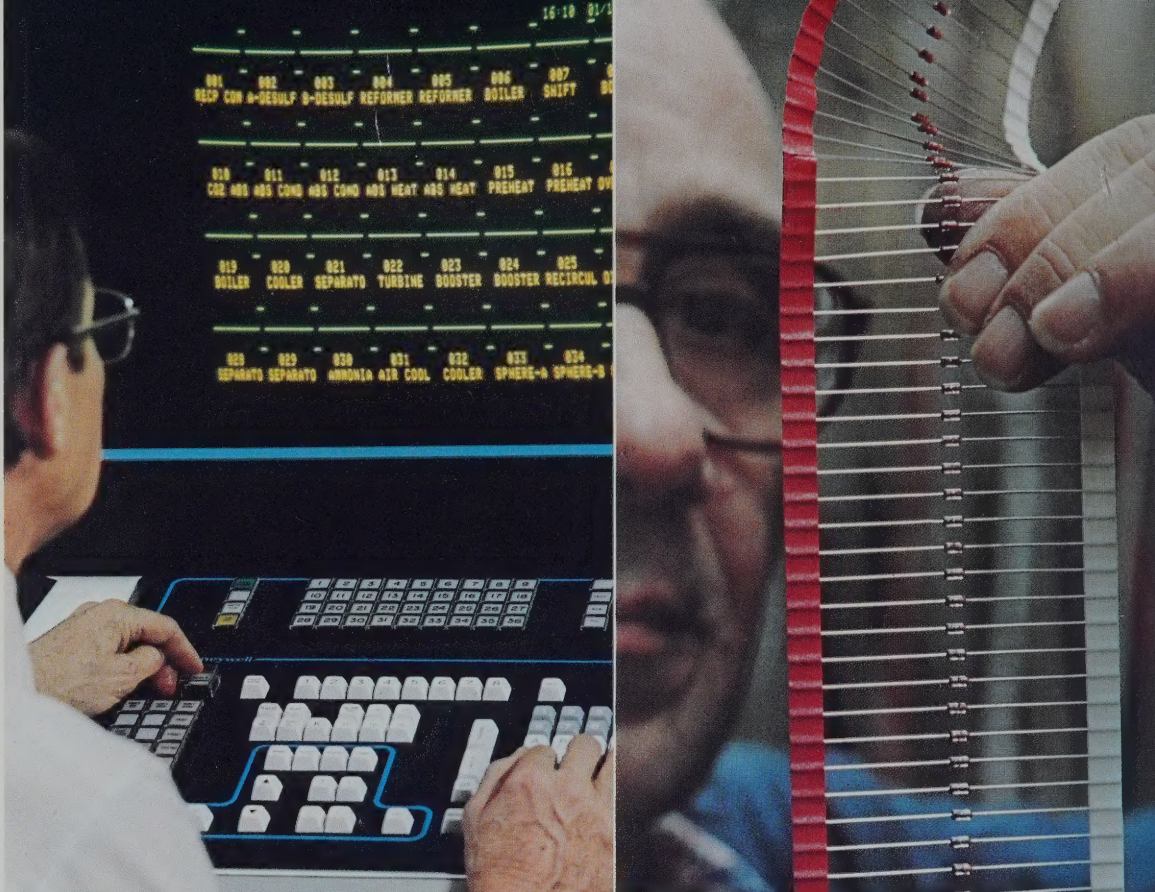
Upper Left: Keyboard and video-type (CRT) display provides TDC 2000 operator with total access to all process control locations and functions in a plant.

Centre: Total Distributed Control architecture embodied in the TDC 2000 provides flexibility of application and simplicity of use never before attainable.

Lower Left: Diffused silicon transmitter which transmits operating information on flows and pressures to the TDC 2000.

Upper Right: TDC 2000 printed circuit-board components are placed on tape rolls for automated assembly operations.

Lower Right: Printed circuit-boards in production at Honeywell's Fort Washington, Pa. Process Control Division.



Our Business Purpose

Honeywell is an automation company, dedicated to helping make people more productive through automation systems. This objective has led us to serve almost every known type of industry and enterprise in some 58 countries around the world. And it has resulted in a range of Honeywell products and services that encompass many technologies, and respond to markets almost as broad as technology itself.

Honeywell is functionally organized into two operations that are responsible for two broad aspects of automation: Control Systems, in which Honeywell is the recognized leader, and Information Systems, in which Honeywell is the second largest company engaged in that business.

Honeywell Limited is the Canadian subsidiary of the world-wide parent company, Honeywell Inc., Minneapolis, Minnesota.

Préférez-vous recevoir cette brochure en français? Dans ce cas, veuillez en faire la demande à notre service des fournitures et de la documentation, MS-089, à Scarborough, Ontario, en mentionnant la référence A381F.

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Our sales and net earnings in 1977 again showed significant improvement as both our Control Systems and Information Systems product groups exceeded targeted goals.

Against the background of the state of the Canadian economy last year, this was a first class achievement.

Most importantly, our success last year was a reflection of the excellence of Honeywell people and the high standing Honeywell enjoys in the Canadian marketplace as a producer and marketer of quality products.

I hope all employees will feel a real sense of personal satisfaction in our operating results for the year. Our corporate objectives were attained by dedicated individual effort and by all of us working as a team. All employees deserve congratulations. Teamwork, I would add, will be increasingly important to our future success as the technologies of our two product groups, Control Systems and Information Systems, become more interdependent in respect to product development and marketing.

As you know, the economic climate for Canada last year continued to be debilitated by inflation, high unemployment, sharply reduced capital spending by most business sectors and shaky consumer confidence. At the same time, additional costs were incurred by Honeywell in Canada because of the deterioration in the Canadian dollar in relation to the American dollar.

Despite these conditions, our sales in 1977 were \$156.4 million, compared with \$133.1 million in 1976 and \$115.1 million in 1975.

Net earnings in 1977 were \$10.7 million compared with \$7.3 million in 1976 and \$5.1 million in 1975.

Three primary factors in 1977 enabled us to overcome a generally adverse business climate.

One, the firm inroads being made by our Information Systems product group in the intensely competitive data processing market in Canada.

Two, our product strength and established reputation in the building environment and energy control systems markets.

Three, our continued ability to compete in the export markets with Canadian-designed and Canadian-made products from our Scarborough factory.

Operations Summary

As you will note in the Control Systems section of this report, the company performed very well in supplying the market with products and services related to lowering operating costs, particularly in respect to energy consumption in all types of buildings.

We had good success in the electric heating market. This was due, in part, to the high rate of housing completions in Canada in 1977. There was also a strong replacement market for "energy management" products in homes and older, smaller commercial-type buildings.

New construction in Canada, for the second consecutive year, was depressed in 1977, affecting traditional heating, ventilation and air-conditioning business. This was more than off-set by increased sales of Honeywell building environmental control systems and building service contracts.

The marketing success in 1977 of the micro-processor-based TDC 2000 for industrial process control clearly reflected the benefits Honeywell is deriving — and will, even more so, in the future — from its expertise in both advanced solid state computer technology and digital electronics. The petrochemical industry has enthusiastically received the TDC 2000 system, and other process industries are now looking to Honeywell as the industry leader.

Our MICRO SWITCH division, the only manufacturer of digital keyboards in Canada for computer-related applications, enjoyed an excellent year, in keeping with a generally strong market for data processing equipment.

We were also gratified by the outstanding performance of our subsidiary, Amplitrol Electronics, Candiac, Quebec. High demand for product was experienced from financial institutions.

Following a period of acquisition and consolidation, I am pleased to tell you that our Information Systems group is today operating from a solid base. 1977 was a record year for H.I.S. in both real growth and profitability, as you will see in the more detailed review elsewhere in this report.

Information Systems will enter 1978 with the

strongest product line in its history, from mini to very large computer systems. In today's cost-conscious market, customers are increasingly sensitive to the benefits of the wide range of computer capabilities that Honeywell is able to offer.

Export

By dollar value, almost a third of the production of our Scarborough factory today is for export.

In 1977, Canadian-designed hydronic zone valves enjoyed remarkable success in Europe and, coupled with sales of limit switches to the United States, contributed to a highly satisfactory export sales volume last year. We have also begun exporting security alarm systems, and are experiencing very satisfactory results in the export of the Canadian-developed optic liquid level sensor system.

It should be observed that our Canadian company succeeds in the export markets only to the degree that we succeed in being price-and-quality-competitive.

If a Honeywell affiliate anywhere in the world, or a competitor, can produce a product cheaper than getting it from our Scarborough factory, we lose that business. We look, therefore, at marketing and manufacturing opportunities on the basis that we have to make our costs internationally competitive.

Outlook

In 1978, we are looking to further growth, based on improving prospects for the Canadian economy, and the introduction of a considerable range of new products by our various divisions. These will include Residential Division's new smoke detector, the new Building Operation Service System (BOSS) program by Commercial, a new application for our optic liquid level sensor

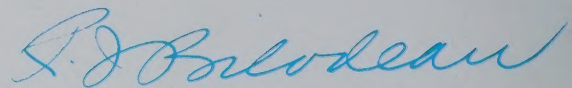
system, a broadening of our line of scientific products, and new, highly competitive products in our Information Systems group.

The economy, however, will continue to be faced with the dilemma of high unemployment levels. We will not succeed in dealing satisfactorily with this problem until our economy is buttressed by a stronger, more competitive manufacturing base.

It is by the manufacture of goods that we derive maximum value from our increasingly scarce natural resources, put the skills of our adult population to work, and most importantly, produce real, tangible wealth in the form of "value added" goods. And for every job we create in manufacturing, a new job is also created in our service industries. We must seek solutions to our unemployment problem by a dramatic commitment by federal and provincial governments to fostering the growth of a competitive, dynamic manufacturing industry in Canada.

Critical to the future of the Canadian manufacturing sector will be the outcome in 1978 of world trade talks aimed at a freer flow of trade among the world's major trading nations. There must be a better resolution of the non-tariff issues and barriers, which are generally agreed to be the greatest hindrance to trade liberalization.

Honeywell will continue to compete successfully, both at home and abroad, providing we maintain our efficiency, high quality standards and realistic economic expectations — both for ourselves personally and for the country as a whole.



CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Honeywell becomes a retail merchandiser for the first time in 1978 when it introduces its new smoke and fire detector, designed especially for home use. Detectors are now mandatory for new homes in some provinces.



Honeywell DETECTOR

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SMOKE & FIRE
DETECTOR
TRUST HONEYWELL TO PROTECT YOUR FAMILY!
PROTECT YOUR FAMILY.

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SMOKE & FIRE
DETECTOR

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DETECTOR

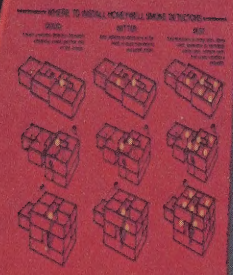
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Sales revenue generated by the divisions that make up the Control Systems product group increased 13 per cent in 1977 over the previous year, notwithstanding continuing weakness in the Canadian economy. A major contributing factor was the growing demand for Honeywell's well-known and well-established range of control systems related to energy conservation. The demand for such systems will continue to expand as energy costs rise and will, as a result, provide an important thrust to Honeywell's future growth in sales revenue and earnings in Canada.

Residential Division

NATURE OF BUSINESS:

The Residential Division supplies the Canadian market with 19 different product families, including thermostats, electronic air cleaners, smoke detectors, oil, gas, and electric heating controls, flame safeguard controls and control systems for electrical and electronic heating, ventilating and air-conditioning systems.

The Residential Division had a strong year in 1977 in both segments of its business. A high rate of housing completions provided a solid market for the division's traditional "comfort control" products. At the same time, sales of energy management and retrofit products in commercial and residential construction received a boost from high volumes of complete system replacements.

A major development was the planned introduction of a line of ionization-type early warning smoke detectors for installation in new construction and for safety modernization of existing homes. The product line will be retailed in 1978. It will be the first time Honeywell has entered the consumer market directly. Both Alberta and Ontario have made the smoke detector mandatory in new home construction and at least two other provinces are expected to follow in 1978. The Canadian retail smoke detector market is estimated at \$20 million.

The division will also introduce in 1978 a new battery-powered Chronotherm clock thermostat which can be readily installed, solving some application problems in modernization and retrofitting.

In 1977, the division introduced a portable electronic air cleaner for use in apartments, hydronically-heated houses, and commercial office applications. A second innovation was a self-contained unit, with its own fan, for use in restaurants, bowling alleys and cocktail bars.

Electronic air cleaners with wider commercial and industrial applications will be introduced in 1978. The product line is designed to meet labour legislation trends in providing a more pleasant working environment at lower energy costs and with only minimal fresh air demands.

Residential also is benefitting from a resurgence in demand for the combination wood/coal and oil burning furnace, by supplying a new Canadian-made damper flapper for such furnaces. The market for this product is expected to expand considerably in 1978.

The division expects continued overall growth, especially in renovations to complete heating systems which should offset a decline in new construction starts in 1978. High volumes of exports of limit switches to the United States and of hydronic zone valves to Europe should continue.



Commercial Division

NATURE OF BUSINESS:

The division provides computer-controlled building automation and energy management systems, together with environmental control systems and service maintenance contracts. In addition, the division provides products and services for office and institutional buildings for control of heating, ventilating and air-conditioning, fire alarm and security.

While the total square footage of new construction in Canada dropped in 1977, the Commercial Division obtained a greater percentage of the new construction dollar. This resulted from increased demand during the year for building environmental and energy management systems, especially computerized central energy control systems. The demand for such systems is not only in new buildings but in older buildings where an increasing number are being retrofitted with better control systems, such as the Honeywell Delta automation systems, to reduce energy and operating costs.

The Commercial Division introduced in 1977 two enhancements to its proprietary Alpha 1000 fire security detection system. One was a supplementary voice communication system for fire warning; the other, a card

access system to provide control of off-hours access to buildings.

The division enjoyed a good sales year in service contracts, both Honeywell Maintenance (servicing of building control systems) and Mechanical Maintenance (servicing by Honeywell of all mechanical equipment in a building.) This reflects building owners' concern for proper maintenance of all energy-consuming equipment.

In 1978, the Commercial Division will further strengthen its energy management capabilities by introducing a Building Operation Service System (BOSS). "Boss" will enable owners of smaller building units to have their own Honeywell Delta automation system. This new program will allow Honeywell to fully manage the energy use in clients' buildings. This will be done over leased telephone lines to a centrally located Honeywell Delta 1000, manned 24 hours a day.

It is expected that capital expenditures in 1978 for all classes of non-residential building construction in Canada will decline for the third year. This will continue to adversely affect the division's heating, ventilation and air-conditioning control systems business.



Left: Energy management seminars are conducted regularly for engineering consultants and Honeywell customers by company branch personnel across the country.

Right: Using computer programming, a Honeywell Delta System provides complete environmental control of the Place Desjardins complexe in Montréal. Featured here is the unusual Mall interior.

Industrial Division

NATURE OF BUSINESS:

The Industrial Division is in the businesses of engineering and supplying electronic control systems for the process industries; maintenance contract sales to provide for the servicing of analog and digital instrumentation; sales of test instruments for research and biomedical applications.

Each of the three business units that make up the Industrial Division performed well in 1977, highlighted by the widespread acceptance of Honeywell's Total Distributed Control system for industry.

Behind this acceptance is the TDC 2000 micro-processor-based system, which was introduced in 1975 and has moved to the forefront in Canada, and internationally, in providing industry with the latest technology for automatic control of entire industrial processes. The division introduced functional extensions to the TDC line in 1977, giving Honeywell the most advanced control system of its kind. The division expects an even stronger performance for the TDC 2000 in Canada in 1978, with continued high market penetration of the petro-chemical industry. Other market opportunities for the TDC 2000 are looked for in the pulp and paper and steel industries. The trend to the TDC-type control is being stimulated by the need for better energy management and plant operating efficiencies — both fields in which Honeywell has extensive experience.

The division's contract service and maintenance business, particularly in the medical field, is expanding rapidly. The division in 1977 introduced a new maintenance management program for Canadian hospitals and laboratories called "Service Plus". The program is designed to reduce downtime and to lower service costs associated with the use of laboratory and hospital biomedical equipment. Within four months of introduction, the "Service Plus" program went into four Canadian hospitals.

The third business unit of the Industrial Division is scientific products, comprising the Denver Test Instruments product line and the American Optical Company's hospital patient monitoring systems, for which Honeywell has exclusive distribution rights in Canada. However, many sales go to government funded institutions, including universities, hospitals, the military and government research labs. As a result, sales in 1977 of some products were not as buoyant as hoped for because of govern-



ment budgetary constraints. This was offset by developing strength in industrial applications, particularly in the electric power utilities market.

Broadening of the scientific product line in 1978 is expected to bring further overall sales improvement. Included are the microprocessor-based ACS 1000 Blood Analyser and American Optical Pulsar 4 Defibrillator.

Micro Switch Division

NATURE OF BUSINESS:

The MICRO SWITCH Division produces the most extensive line of switches and controls in the world (some 40,000 separate product listings) for manufacturing, material handling and automotive applications. The Division also manufactures solid state keyboards, high performance DC motors and solid state switches for computer and other applications.

Sales of solid state keyboards increased dramatically in 1977. The MICRO SWITCH Division is the only manufacturer of digital keyboards in Canada, which are used in computer data entry equipment, word processors and as data input for the Canada Post Office automation program.

The division has an exclusive agreement with Automatic Timing and Controls Co., King of Prussia, Pennsylvania, to market their timers and counters in Canada. Sales of these controls maintained a satisfactory level last year.

Orders for traditional products were only slightly above 1976 levels because of below-normal business activity in the original equipment manufacturers' market. This situation was offset by the good performance of the division's authorized distributors, reflecting investment in maintenance and repair activity by business rather than capital expenditures.

The division's new line of photoelectric controls, introduced in 1976 improved their

market penetration last year. The optic liquid level sensor system, developed and manufactured by Honeywell in Canada, has achieved strong market acceptance in Canada and among a number of the major oil companies in the United States. Export markets for the sensor system are also developing in Japan and Australia.

In 1978, the division plans to introduce an optic liquid level sensor designed for the safe filling of railroad cars with petroleum products. There is expected to be a substantial North American market for such a product in the next few years.



Upper Left: Honeywell flight control systems for the Canadian armed forces are maintained by highly skilled technicians in the company's Scarborough factory.

Lower Left: Honeywell introduced last year, an electronic equipment maintenance management program for Canadian hospitals and laboratories called "Service Plus".

Upper Right: Precision assembly of Honeywell's Canadian-designed optic liquid level sensor system to prevent overfilling of tanks, such as those used by the petroleum industry.

Lower Right: Landing gear system of Canada's internationally acclaimed De Havilland "Dash 7" short-take-off airplane uses Honeywell micro-switches.

Amplitrol Electronics Limited

NATURE OF BUSINESS:

Amplitrol Electronics designs, manufactures, installs and services electronic security alarm systems for financial institutions and for commercial, industrial and retail applications. The division also provides 24-hour monitoring service from 14 secured stations in the major metropolitan areas across the country.

Amplitrol was acquired by Honeywell in 1973. Since acquisition sales revenue has increased threefold.

Amplitrol security systems are currently installed in more than half of the branches

of Canada's chartered banks and 1977 sales continued this pattern. Several of the chartered banks are also engaged in upgrading their security systems using Amplitrol's latest equipment.

During 1977 the division took increased action to accelerate growth and improve the profitability of its commercial alarm business. The division is also expanding into export markets and anticipates that exports will be a promising growth area for its unique, high-quality line of alarm systems which are heavily dependent on advanced digital technology.



Electronic security alarm systems, using advanced digital technology, are made by Honeywell's subsidiary, Amplitrol, in its Candiac, Quebec factory.

Latest Honeywell data processing equipment is used in the company's Management Information Systems Data Center, located in the Scarborough Corporate Office. In 1978, the Center will process data on a Level 66 for all primary administrative functions of the company, including production, inventory and financial planning and control, product distribution and marketing. The Center also serves as a customer demonstration facility.





Honeywell's Page Printing System, controlled by a Level 6 computer, was introduced to the Canadian market in 1977. It produces up to 18,000 lines per minute on standard binder-size paper. It can cut, punch, perforate, collate, stack and print a distribution form in a single pass through the system. Shell Canada's Calgary office purchased the first unit. Honeywell has a customer demonstration facility for the PPS at its Corporate Office.

Honeywell Information Systems enjoyed a year of record performance in 1977, with increased sales and revenues reflecting real growth in the marketplace and profit contribution ahead of planned objective. This also took into consideration the negative effect on profits of the devalued Canadian dollar during 1977, bearing in mind that mainframe and most peripheral computer equipment sold in Canada is imported from manufacturing facilities in the U.S., France, and Italy.

The year clearly demonstrated that in the mission of providing a full range of information processing hardware, software and related services to the Canadian market, H.I.S. is working from a solid base today. During the period 1970-76, the product group underwent the necessary process of acquisition and consolidation to establish the product and market foundation for future growth in a competitive, quickly changing industry environment.

The highly satisfactory performance of H.I.S. in a depressed economy reflects one of the underlying strengths of the computer business. When business conditions are tight, customers and prospective customers of information processing systems are more sensitive to the benefits available through automation. These benefits include expanded applications which make possible better informed, timely management

decisions in day-to-day business operations and planning functions; improvements in inventory management and customer service levels; and improved financial controls.

In 1977, H.I.S. introduced an expanded, top-of-the-line array of Series 60 computer systems and related communications capabilities to provide major advances in Distributed Systems Environment (DSE). As a result, Honeywell last year was placed in a unique position in the general-purpose and minicomputer segments of the computer industry. Of all the manufacturers of computers operating today, only Honeywell has designed, produced, sold and installed both general purpose and minicomputer systems for well over a decade. In addition, H.I.S. has become a major force among full product line vendors in both the Control Systems and Information Systems markets.

These two factors make Honeywell well situated to meet the coming demand for distributed systems which will include process control and sensor-based distributed applications.

Honeywell's distributed systems philosophy is based on striking a balance between the freedom and flexibility of local access, and the necessity for maintaining overall system standardization and control.

The company introduced last year four host

processors: the medium-to-large-scale Models 64/60, 64/50, and 64/30; the DATANET 6678 front-end network processor; the DST 6/500 intelligent terminal; the RBT 6/300 Remote Batch Terminal systems; and a low-cost display terminal, the VIP 7700R.

H.I.S. will enter 1978 with a full-range concept for the large-scale Level 68 virtual memory computer system that extends its performance range beyond that of competitive offerings. The Level 68/Distributed Processing System (Level 68/DPS) is a single model with four levels of performance, each of which supports up to four million words of main memory. Additional performance is available through an option to add companion processors to the system once the fourth level of performance is reached.

The company's Level 6 minicomputer system will be available in four models in 1978:

- Model 33, the smallest system, offering users the combination of basic capabilities and economy;
- Model 43 offering higher levels of functionality, including addressing up to one million words;



Upper Right: The University of Waterloo is one of the outstanding computer research centers in North America and its Mathematics Faculty and Computer Center (above) is working on experimental software for Honeywell's Level 66.

Centre Right: The performance range of Honeywell's Level 68/Distributed Processing System (DPS) has been extended in 1978 beyond that of competitive systems. The Honeywell system is designed to meet the requirements of large-scale hosts in a distributed systems environment. The Level 68/DPS is a single model with four levels of performance, each of which supports up to four million words of main memory.

Lower Right: New in 1978 is Honeywell's Level 6/43, one of four new models in its minicomputer systems. This model embodies the latest advances in minicomputer technology, including directly addressable memory of up to one million words.



- Model 47 which matches Model 43 in general purpose applications and also has a commercial processing capability;
- Model 53, at the top of the line, which has a high speed cache memory to improve central processing performance and a memory management unit to control access and program sharing among multiple users.

1978 is expected to see strong market interest in Honeywell's Page Printing System. This new product combines the Level 6 minicomputer and the company's electrographic technology in a system that can produce up to three million pages a

month with the 18,000-line-per-minute model version. The PPS is available in three models.

The company's Canadian computer operations will benefit in 1978 and beyond from Honeywell Inc.'s acquisition in January of Incoterm Corporation of Wellesley, Mass. The Incoterm purchase enables Honeywell to offer its computer network customers total systems solutions tailored to specific industry applications.

H.I.S. expects that its minicomputer and large systems markets in Canada will continue to grow in 1978 at their current greater than 20 per cent per annum rates.



Upper Left: Cockfield Brown, one of Canada's leading advertising agencies, installed a Level 62 in its Montreal office last year, together with a communications hook-up with their Toronto office. Applications include television evaluation, radio reach and frequency, and media clerical systems.

Upper Right: Air Canada is a large scale user of Honeywell's Level 66 computer for all its major scheduling requirements. As well, Air Canada uses a software program for flight operations control and aircraft maintenance, developed in cooperation with Honeywell.

Lower Right: A Honeywell Level 64/30 computer system at Benjamin Montreal News Registered handles some 3,000 publication titles for about 2,500 individual dealers and processes returned merchandise for credit. It also handles the work of two client distributors for Benjamin, one of Canada's largest publication distribution agencies. Here H.I.S. sales representative Gérard Chollet, left, talks with Les Feasey, Benjamin data processing manager, in Benjamin's computer centre.



The Year in Review

(\$,000)
1977

Gross Revenue	156,348
Net Earnings (before dividend)	10,767
Total Assets (net)	127,668
Property, Plant & Equipment (net)	29,757
Number of Employees (Average)	2,942

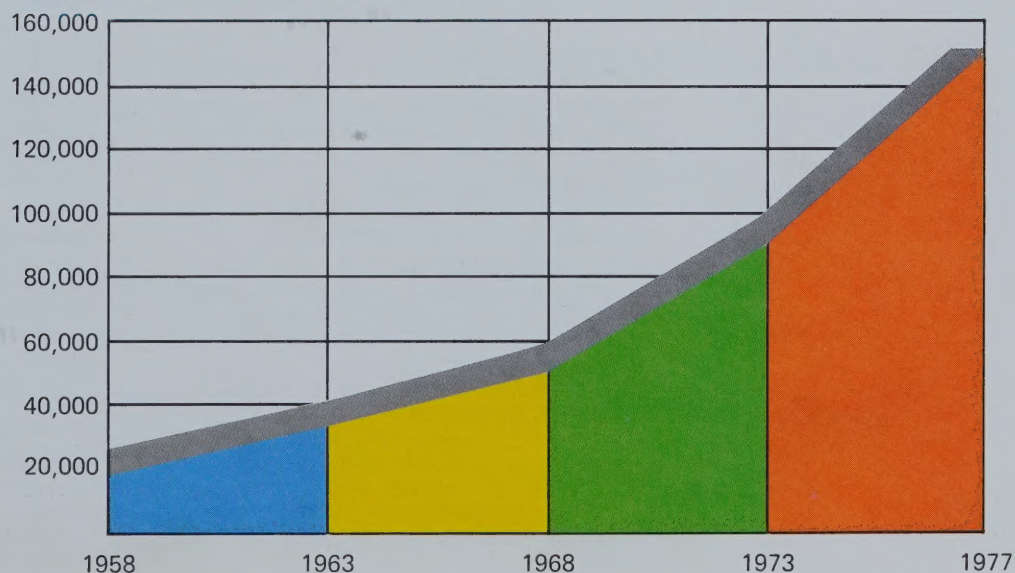
How the 1977 Sales Dollar was divided



(\$,000)

Employee costs, including wages, salaries and benefits	53,422	34.2%
Cost of materials and services purchased from suppliers	65,537	41.9%
For replacement of plant and equipment	10,691	6.8%
Taxes paid to federal, provincial and local governments	15,614	10.0%
Interest expense	317	0.2%
Dividends	1,214	0.8%
Retained earnings invested in business assets such as new equipment, inventory, etc.	9,553	6.1%
Gross revenue for 1977 from sales, rentals, services	156,348	100.0%

Sales Revenue Growth (dollars)



MAJOR HONEYWELL PRODUCTS by INTERNATIONAL DIVISIONS AND MANUFACTURING LOCATIONS

CONTROL SYSTEMS

Aerospace and Defense Group

Avionics Division

Space programs, commercial aviation, military avionics/electronic systems, navigation and guidance systems. Manufacturing plants: Minneapolis, Minnesota and St. Petersburg, Florida.

Defense Systems Division

Combat fire control systems, munitions, torpedos. Manufacturing plants: Minneapolis, Minnesota and Horsham, Pennsylvania.

Defense Electronics Division:

Marine systems research, training and control systems, ceramics, electro-optical and infrared sensing systems. Facilities in Seattle, Washington; West Covina, California; Lexington, Massachusetts; Hopkins, Minnesota, and Annapolis, Maryland.

Systems and Research Center:

Provides continuous flow of new technologies and products to the divisions of the Aerospace and Defense Group. Laboratory: Minneapolis, Minnesota.

Industrial Products Group

Test Instruments Division:

Sensing and recording instruments, data acquisition systems for research laboratories and communications facilities, production testing; medical instrumentation; instrument repair and recalibration service. Manufacturing plant: Denver, Colorado.

Process Control Division/Fort Washington:

Instruments and automation systems to indicate, record and control industrial processes; industrial valves. Instruments, control devices and motors for installation on industrial, agricultural, mobile and scientific equipment. Manufacturing plants: Fort Washington and King of Prussia, Pennsylvania; Houston, Texas, and Minneapolis, Minnesota.

Process Control Division/Phoenix:

Computerized process control systems. Manufacturing plant: Phoenix, Arizona.

Traffic Management Center:

Street and highway vehicle control systems, equipment and services. Headquarters: Minneapolis, Minnesota.

Environmental Control Systems Group

Residential Division

Environmental controls for residences and small commercial buildings; electronic air cleaners; flame safety systems. Manufacturing plants: Minneapolis, Minnesota, and Los Angeles, California.

Commercial Division:

Environmental control systems for buildings; fire detection and security systems; building automation systems; equipment maintenance service. Manufacturing plants: Chicago, Illinois, and Akron, Ohio.

Protection Services Division

Central station monitoring of fire and security alarms. Headquarters: Minneapolis, Minnesota.

Energy Resources Center:

Research and development in energy collection, conditioning, storage, utilization, management and conservation. Headquarters: Minneapolis, Minnesota.

Components Group

MICRO SWITCH Division

Precision electrical switches; lighted and unlighted pushbutton switches; non-contact switches; data entry keyboards; high-performance servo motors. Manufacturing plants: Freeport and Warren, Illinois; Marlborough, Massachusetts, and Mars Hill, North Carolina.

CORPORATE

Computer Sciences Center:

Involved in advance studies of computer systems, software and architecture. Laboratory: Minneapolis, Minnesota.

Solid State Electronics Center:

Research, development and application of solid state technology. Laboratories: Minneapolis, Minnesota, and Colorado Springs, Colorado.

Corporate Material Sciences Center:

Basic research in materials and all applicable sciences. Laboratory: Minneapolis, Minnesota.

INFORMATION SYSTEMS

Large Information System Division:

Product planning, engineering, manufacturing and support for Large Systems for HIS markets, world-wide. Engineering and manufacturing facilities: Phoenix, Arizona.

Small/Medium Information Systems Division:

Product planning, engineering, manufacturing, OEM sales and support for the Level 6 and certain terminal products for HIS markets world-wide. Product planning, engineering support, manufacture and/or refurbishment in the U.S. for small and medium systems and peripherals. Engineering and manufacturing facilities: Brighton, Billerica and Lawrence, Massachusetts. Subsidiary: Incoterm Corporation, Wellesley, Massachusetts.

Honeywell Information Systems Italia:

Development and manufacture of computer systems and peripheral equipment; and marketing and servicing of computer products manufactured by HIS and CII — HB in Italy, Yugoslavia, Israel, Turkey and Iran.

Honeywell Information Systems Limited:

Manufacture of computer systems. Development of software and special systems. Marketing and servicing of computer products manufactured by HIS and CII — HB in the United Kingdom and Ireland. Offices: London, England. Manufacturing facility: Newhouse, Scotland. Systems center: Hemel Hempstead, England.

Honeywell Information Systems — Pacific/Canada/Mexico:

Marketing and servicing of computer products manufactured by HIS and CII — HB in Australasia, the South Pacific, Southeast Asia, South Africa, the India Subcontinent, Canada, Mexico, Central America and the Caribbean Islands. Offices: Minneapolis, Minnesota; Toronto, Canada; Tokyo, Japan; Mexico City, Mexico.

INTERNATIONAL OPERATIONS

Canada:

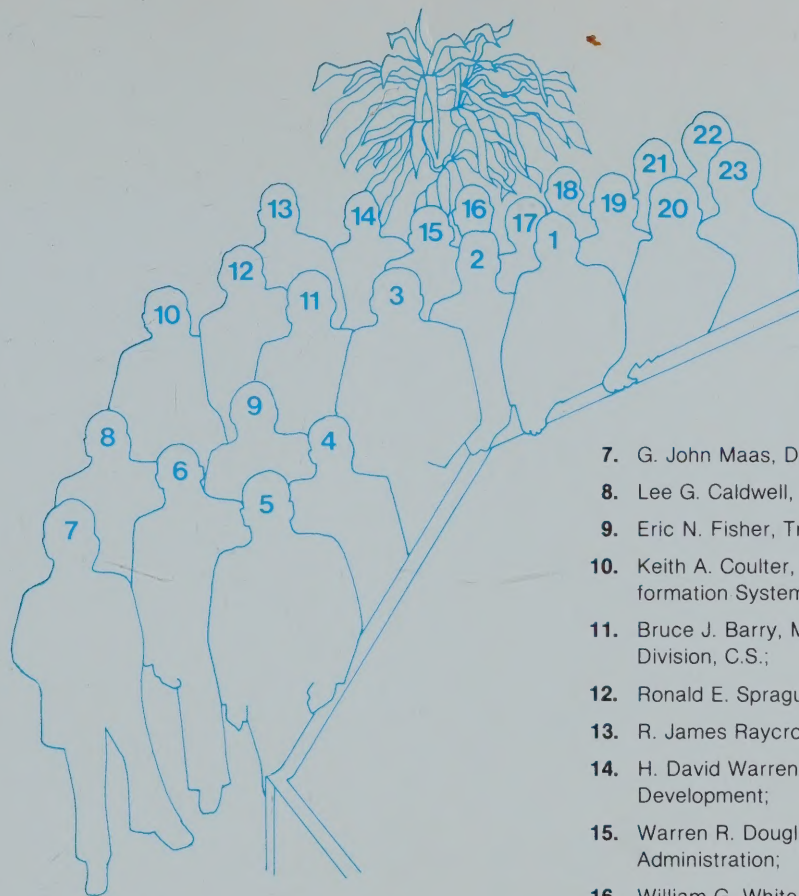
Headquarters office: Scarborough, Ontario. Manufacturing plant: Scarborough Ontario.

Europe:

Subsidiary companies and affiliates: Austria, Belgium, Denmark, Finland, France, Germany, Iran, Italy, Jordan, Kuwait, the Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom. Headquarters office: Brussels, Belgium. Manufacturing plants: Hemel Hempstead, England; Amiens, France; Doernigheim, Waechtersbach and Muehlheim, Germany; Emmen, the Netherlands; Newhouse, Bellshill and Uddingston, Scotland; Madrid, Spain.

Latin America:

Subsidiary companies: Argentina, Brazil, Mexico, Venezuela. Headquarters office: Minneapolis, Minnesota (USA); Manufacturing plants: Sao Paulo, Brazil; Mexico City and Chihuahua, Mexico.



Senior Management Group:

1. Rodrigue J. Bilodeau, Chairman, and Chief Executive Officer;
2. John H. Brace, President, and General Manager, Honeywell Control Systems;
3. Richard J. Ball, Vice President, and General Manager, Honeywell Information Systems;
4. Gordon E. Howey, Controller, C.S.;
5. Charles M. Spence, Director, Field Engineering, H.I.S.;
6. William S. Dinnie, Director, Support Operations, H.I.S.;
7. G. John Maas, Director, Marketing, H.I.S.;
8. Lee G. Caldwell, Controller, H.I.S.;
9. Eric N. Fisher, Treasurer, Corporate;
10. Keith A. Coulter, Manager, Management Information Systems;
11. Bruce J. Barry, Manager, MICRO SWITCH Division, C.S.;
12. Ronald E. Sprague, Manager, Commercial Division, C.S.;
13. R. James Raycroft, Manager, Industrial Division;
14. H. David Warren, Director, Planning & Business Development;
15. Warren R. Douglas, Manager, Corporate Field Administration;
16. William G. White, Manager, Residential Division;
17. J. Boyd Simpson, Legal Counsel, H.I.S.;
18. Douglas C. Montrose, Director, Employee Relations, C.S.;
19. Patrick J. Suddick, Vice President, Corporate Field Marketing;
20. Max C. Coutts, Director, Manufacturing;
21. Brian M. McGourty, Vice-President, and General Manager, Amplitrol Electronics;
22. Michael Wilson, Director, Employee Relations, H.I.S.;
23. Terrance A. J. Goudie, Corporate Secretary.

Missing: Gerald H. Sedgley, Vice President, Marketing, C.S.

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Alberta — Calgary, Edmonton
Saskatchewan — Regina, Saskatoon
Manitoba — Winnipeg
Ontario — Windsor, London, Hamilton
Sudbury, Toronto, Ottawa
Québec — Montréal, Québec City, Sherbrooke
New Brunswick — Moncton
Nova Scotia — Halifax
Newfoundland — St. John's

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Sudbury, Toronto, Ottawa
Québec — Montréal, Québec City
Nova Scotia — Halifax

